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EXAMINER	
THIRUGNANAM, GANDHI	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/506,311	KONDO ET AL.	
	Examiner	Art Unit	
	GANDHI THIRUGNANAM	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 November 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 September 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Remarks

The response received on 05 November 2008 has been placed in the file and was considered by the examiner. An action on the merits follows.

Applicant has amended claims 1, 11 and 15-17. No claims have been canceled. Claims 1-17 are pending.

The Examiner withdraws the Objection to the Specification.

The Examiner withdraws the USC 112 rejections of claim 17 in light of the pending amendments.

The USC 112 1st paragraph rejection of claim 8 regarding the definition of "thinning" is withdrawn.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05 November 2008 has been entered.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. **Claims 1, 11 and 15-17** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 11 and 15-17 recites "generating a key ..." and "using the key..." There is no key disclosed in the original disclosure.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claim 1** line 18 recites "using the key through the pupil opening". Which key? The "key of the pupil opening degree index" (line 16) or one of the other "keys of opening degree index" (line 9)

Claims 11 and 15-17 are rejected under the same reasoning as claim 1 above.

Claim 1 line 7 recites "the obtained pupil opening degree". There is insufficient antecedent basis for this limitation in the claim. No pupil opening degree has been claimed.

Claim 8 recites "thinning the parameters before registration. Applicant argued (Applicant's argument 11/05/2008 on page 11) that "thinning the parameters" means causing the parameters to be come fewer in number. The specification ¶[0152] clearly

states "each parameter may be thinned...". Therefore it appears that the number of parameters remains the same. So applicant's definition does not make sense. Applicant must furnish a copy of Merriam-Webster's Collegiate Dictionary, 10th Edition (pg. 1225).

Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 17 states a "recording medium", but the disclosure does not define a "medium". The specification does disclose "a memory which serves as a recording medium" in ¶ [0187] of the PG Publication. The Examiner suggests changing "recording medium" to "memory".

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 11-13 and 15-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Oda (Patent #6,542,624), hereafter referred to as Oda.

Regarding **claim 11,** Oda discloses a personal authentication method using iris images, comprising:

the first step of acquiring an iris image from a person to be authenticated; *(Oda, Col. 4 Lines 9-11)*

the second step of obtaining feature data and a pupil opening degree index from the iris image obtained at the first step; *(Oda, Col. 4 Lines 11-13, the system verifies whether or not the photographed image of the eye exhibits biogenic responses, Where typical biogenic responses are defined in Col. 3 Lines 54-62. The "pupil opening index" references "the contraction of pupil diameter")*

the third step of generating a key of a pupil opening degree index corresponding to the obtained pupil opening degree and using the key through the pupil opening degree index to obtain feature data to be collated from data registered for a registrant in an iris database in which data registration has been done using the pupil opening degree index with a key corresponding to the pupil opening degree obtained at the second step; and *(Oda, Col 9, Lines 23-28, "The iris code generator 7 of the PC 5 generates iris codes from the iris images shown as images 15 to 17 of FIG. 1 sent from the image processor 29.") (Oda, Col. 3 Lines 8-12, "the present invention has an iris code generating device and a database for storing iris codes of individuals and identifies individuals by matching an iris code generated by the iris code generating device and an iris code stored in the database.")*

the fourth step of comparing the feature data to be collated which is obtained at the third step with the feature data obtained at the second step to determine whether or not the person to be authenticated is identical to the registrant. *(Oda, Col. 3 Lines 8-12, "identifies individuals by matching an iris code …")*

Regarding **claim 12,** Oda discloses the personal authentication method of claim 11, wherein:

the iris database stores at least one piece of feature data for each registrant together with a pupil opening degree index; *(Oda, Col. 3 Lines 8-12, the database for storing iris codes of individuals and identifies individuals)* and

at the third step, a pupil opening degree index registered together with the feature data, which is selected from the at least one piece of feature data registered in the iris database in conjunction with the registrant, is compared with the pupil opening degree index obtained at the second step to specify the feature data to be collated. *(Oda, Col. 3 Lines 8-12, "identifies individuals by matching an iris code ...", where the iris code can be one of four codes based on lighting conditions (Col. 12 Lines 9-20))*

Regarding **claim 13,** Oda discloses the personal authentication method of claim 11, wherein:

the iris database stores parameters which express a relational expression between feature data and a pupil opening degree index for each registrant; *(Oda, Col. 12 Lines 9-20, the first to fourth codes generated based on lighting sources)* and

at the third step, a relational expression is obtained from the parameter registered in the iris database in conjunction with a registrant, and the pupil opening degree index obtained at the second step is assigned to the relational expression, whereby the feature data to be collated is obtained. *(Oda, Col. 3 Lines 8-12, "iris code stored in the database" and "identifies individuals by matching", where matching is done*

by comparing iris code. In order to retrieve information from a database a relational expression must be used.)

Regarding **claim 15,** Oda discloses an iris registration device which performs data registration for iris authentication, comprising:

means for acquiring a plurality of iris images from a registrant; *(Oda, Fig. 2, #4 camera)*

means for obtaining feature data and a pupil opening degree from each of the plurality of the iris images; *(Oda, Fig. 2, #19 "Iris Image Processing Section")* and

means for generating a pupil opening degree index from the obtained pupil opening degrees and indexing the obtained feature data using the pupil opening degree index as keys for retrieving in an iris database; and *(Oda, Fig. 2, #19 "Iris Image Processing Section")*

means for performing data registration for the registrant in the iris database using the obtained feature data and the pupil opening degree index. *(Oda, Fig. 2 #8, the "Host")*

Regarding **claim 16,** Oda discloses an iris authentication device which performs personal authentication using iris images, comprising:

means for acquiring an iris image from a person to be authenticated; *(Oda, Fig. 2, #4 camera)*

means for obtaining feature data and a pupil opening degree from the acquired iris image; *(Oda, Fig. 2, #19 "Iris Image Processing Section")*

means for generating a key of a pupil opening degree index corresponding to the obtained pupil opening degree and using the key through the pupil opening degree index to obtain feature data to be collated from data registered for a registrant in an iris database in which data registration has been done using the pupil opening degree index with a key corresponding to the obtained pupil opening degree; *(Oda, Fig. 2, #19 "Iris Image Processing Section")* and

means for comparing the feature data to be collated with the feature data to determine whether or not the person to be authenticated is identical to the registrant. *(Oda, Fig. 2, #10, "Authorized Person Matching Section")*

Regarding **claim 17,** Oda discloses a recording medium encoded with a program for instructing a computer to execute personal authentication using iris images, comprising the steps of:

obtaining feature data and a pupil opening degree from an iris image acquired from a person to be authenticated; *(Oda, Col. 4 Lines 11-13, the system verifies whether or not the photographed image of the eye exhibits biogenic responses, Where typical biogenic responses are defined in Col. 3 Lines 54-62. The "pupil opening index" references "the contraction of pupil diameter")*

generating a key of pupil opening degree index corresponding to the obtained pupil opening degree and using the key through the pupil opening degree index to obtain feature data to be collated from data registered for a registrant in an iris database in which data registration has been done using the pupil opening degree index with a key cooresponding to the obtained pupil opening degree; *(Oda, Col. 3 Lines 8-12,*

*"identifies individuals by matching an iris code …", where the iris code can be one of four codes based on lighting conditions (Col. 12 Lines 9-20)) (Oda, Col. 3 Lines 8-12, "the present invention has an iris code generating device and a database for storing iris codes of individuals and identifies individuals by matching an iris code generated by the iris code generating device and an iris code stored in the database.")*and

comparing the feature data to be collated with the feature data to determine whether or not the person to be authenticated is identical to the registrant. *(Oda, Col. 3 Lines 8-12, "identifies individuals by matching an iris code …")*

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-5, 7-8 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oda in view of Well Known Art.

Regarding **claim 1,** Oda discloses a personal authentication method using iris images, comprising a registration process and an authentication process, the **registration process** including the steps of:

acquiring a plurality of iris images from a registrant; *(Oda, Col. 4 Lines 9-11, 'the subjects eye is photographed at this time by the camera"; Oda states in Col. 4 Lines*

42-45, "The system can generate the life check code in such a manner that the eye of the subject is photographed a preset number of times")

obtaining feature data and a pupil opening degree from each of the plurality of iris images; *(Oda, Col. 4 Lines 11-13, the system verifies whether or not the photographed image of the eye exhibits biogenic response, where typical biogenic responses are defined in Col. 3 Lines 54-62, The "pupil opening index" references the "contraction of pupil diameter". Oda also show other feature data such as Refection of light by the pupil, movement of the pupil…, as well as an image of the eye)* and

generating a pupil opening degree index from the obtained pupil opening degrees and indexing the obtained feature data using the pupil opening degree index as keys for retrieving in an iris database; and *(Oda, Col. 9, Lines 23-28, "The iris code generator 7 of the PC 5 generates iris codes from the iris images shown as images 15 to 17 of FIG. 1 sent from the image processor 29.")*

performing data registration for the registrant in the iris database using the obtained feature data and the pupil opening degree index, and *(Oda, Col 4, Lines 14-24, where the image of an eye exhibiting biogenic characteristics is inputted based on the life check code.)*

the **authentication process** including the steps of:

acquiring an iris image from a person to be authenticated; *(Oda, Col. 4 Lines 9-11)*

obtaining feature data and a pupil opening degree from the acquired iris image; *(Oda, Col. 4 Lines 11-13, the system verifies whether or not the photographed image of*

the eye exhibits biogenic responses, Where typical biogenic responses are defined in Col. 3 Lines 54-62. The "pupil opening index" references "the contraction of pupil diameter")

generating a key of the pupil opening degree index corresponding to the obtained pupil opening degree; and *(Oda, Col 9, Lines 23-28, "The iris code generator 7 of the PC 5 generates iris codes from the iris images shown as images 15 to 17 of FIG. 1 sent from the image processor 29.")*

using the key through the pupil opening degree index to obtain feature data to be collated from data registered for the registrant in the iris database; and *(Oda, Col. 3 Lines 8-12, "the present invention has an iris code generating device and a database for storing iris codes of individuals and identifies individuals by matching an iris code generated by the iris code generating device and an iris code stored in the database.")*

comparing the feature data to be collated with the feature data obtained in the authentication process to determine whether or not the person to be authenticated is identical to the registrant. *(Oda, Col. 3 Lines 8-12, "identifies individuals by matching an iris code …")*

It should be noted that in registering an object into a database, a unique generated key(s) and the object are stored into the database. The process of retrieving an object from a database requires a key(s) to be sent to the database and the database returns the object if the key(s) is found in the database system. The generation of the key should be consistent for proper working of the database. The steps of acquiring the iris image, obtaining feature data and pupil opening degree index

are equivalent to the generation of a unique key(s). The process of storing, retrieving and comparing the keys is part of the basic operation of a database. This can be clearly seen in such publications PGPub 2003/0206645 Fig. 4 and Patent 6,546,121 Fig.2.

Regarding **claim 2,** Oda discloses the personal authentication method of claim 1, wherein:

the registration process includes the step of registering the feature data together with the pupil opening degree index in the iris database in conjunction with the registrant; and *(Oda, Col. 3 Lines 8-12, the database for storing iris codes of individuals and identifies individuals)*

the authentication process includes the step of specifying the feature data to be collated from feature data registered in the iris database in conjunction with a registrant by comparing the pupil opening degree index obtained in the authentication process with the pupil opening degree index registered together with the feature data. *(Oda, Col. 3 Lines 8-12, "identifies individuals by matching an iris code ...", where the iris code can be one of four codes based on lighting conditions (Col. 12 Lines 9-20))*

Regarding **claim 3,** Oda discloses the personal authentication method of claim 2,

wherein the registration process includes the step of at least registering three pieces of feature data of the registrant obtained from iris images in a pupil-contracted state, in a normal state, and in a pupil-dilated state, respectively. *(Oda, Col. 3 Lines 54-62, "Contraction of pupil diameter")*

Regarding **claim 4,** Oda discloses the personal authentication method of claim 2, wherein the registration process includes the steps of:

acquiring a plurality of iris images having different pupil opening degrees from the registrant; *(Oda, Col. 5 Lines 17- Col. 6 Line 43 discloses photographing multiple images based on various light sources. The light sources intensity controls the pupil diameter)*

obtaining feature data from each of the plurality of acquired iris images; *(Oda, Col. 5 Lines 17- Col. 6 Line 43, the pupil diameter)* and

collating the plurality of pieces of feature data with each other to select feature data to be registered in the iris database from the plurality of pieces of feature data. *(Oda, Col. 12 Lines 9-20, the first to fourth codes generated)*

Regarding **claim 5,** Oda discloses the personal authentication method of claim 2,

wherein the authentication process is aborted when feature data having a pupil opening degree index which is close to the pupil opening degree index obtained in the authentication process by a predetermined difference is not registered for the registrant. *(Oda, Col. 8 Lines 64-67, if there is no matching the processing is halted)*

Regarding **claim 7,** Oda discloses the personal authentication method of claim 1, wherein the registration process includes the steps of:

acquiring a plurality of iris images having different pupil opening, degrees from the registrant; *(Oda, Col. 5 Lines 17- Col. 6 Line 43 discloses photographing multiple images based on various light sources. The light sources intensity controls the pupil diameter)*

obtaining a relational expression between feature data and a pupil opening degree index based on a plurality of pieces of feature data and pupil opening degree

indices obtained from the plurality of acquired iris images; *(Oda, Col. 12 Lines 9-20, the first to fourth codes generated based on lighting sources)* and

registering parameters for expressing the relational expression in the iris database in conjunction with the registrant, *(Col 4, Lines 14-24, where the image of an eye exhibiting biogenic characteristics is inputted based on the life check code.)* and

the authentication process includes the step of obtaining a relational expression from parameters registered in the iris database in conjunction with a registrant and assigning the pupil opening degree index obtained in the authentication process to the relational expression to obtain the feature data to be collated. *(Oda, Col. 3 Lines 8-12, "iris code stored in the database" and "identifies individuals by matching", where matching is done by comparing iris code. In order to retrieve information from a database a relational expression must be used.)*

by interpolation. *(Oda, Col. 1 Lines 43-58, the iris code stored on the database)*

Claim 15 is rejected under the same reasoning as claim 1's "Registration Process"

Claim 16 is rejected under the same reasoning as claim 1's "Authentication Process"

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oda in view of Smith (PGPub 2002/0016839), hereafter referred to as Smith in further view of Bowers (Patent 5,546,529), hereafter referred to as Bowers

Regarding **claim 8** as best understood, Oda discloses the personal authentication method of claim 7, wherein:

the registration process includes the step of thinning the parameters before registration; *(Smith, ¶0037)* and

the authentication process includes the step of restoring the thinned parameters by interpolation. *(Bowers, Col. 6 Lines 20-54)*

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Oda with Smith to reduce the size of a database.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Oda and Smith with Bowers top be able to receive any sample point between values in a look-up table.

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flom et al. (Patent #4,641,349), hereafter referred to as Flom.

Regarding **claim 6,** Oda discloses the personal authentication method of claim 5,

But Oda does not specifically teach

"wherein when the authentication process is aborted, a preferable condition for capturing an iris image is estimated based on the pupil opening degree index obtained in the authentication process and a pupil opening degree index associated with registered feature data,*(Flom, Col. 11 Line 65- Col. 12 Line 10)* and

the person to be authenticated is advised to re-acquire an iris image under the estimated capturing condition.*(Flom, Col. 12 Lines 11-17)*"

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Oda with Flom for the purpose of getting the best possible image of the eye.

11. Claims 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida (Patent #6,424,746), hereafter referred to as Nishida.

Regarding **claim 9,** Oda discloses the personal authentication method of claim 1, wherein the registration process includes the steps of:

acquiring a plurality of iris images having different pupil opening degrees from the registrant; *(Oda, Col. 5 Lines 17- Col. 6 Line 43 discloses photographing multiple images based on various light sources. The light sources intensity controls the pupil diameter)*

But Oda does not specifically teach the concept of a transformation rule *(Nishida, Col 4, Line 53 to Col. 5 Line 16 does not disclose the use of iris images, but does discloses use of transformation rule applied to structural features which reads on the feature data.)* in

"specifying registration feature data from a plurality of pieces of feature data obtained from the plurality of acquired iris images and obtaining a transformation rule for transforming the registration feature data to another feature data having a different pupil opening degree index; *(See Nishida Lines above)* and

registering the registration feature data and the transformation rule in the iris database in conjunction with the registrant, *(See Nishida lines above)*

the authentication process includes the step of generating the feature data to be collated using the pupil opening degree index obtained in the authentication process based on feature data and a transformation rule registered in the iris database in conjunction with a registrant. *(See Nishida lines above)*

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Oda with Nishida for the purpose of fixing images deformed by noise.

Examiner notes that the creation of iris code in Oda is a transformation rule. But the transformation rule is not saved in the iris database in conjunction to the registrant. A simple encryption key can also read on the transformation rule.

Regarding **claim 14,** Oda discloses the personal authentication method of claim 11, wherein:

But Oda does not specifically teach the concept of a transformation rule

"the iris database stores feature data and a transformation rule for transforming the feature data to another feature data having a different pupil opening degree index for each registrant; *(Nishida, Col. 4 Line 53 to Col. 5 Line 16)* and

at the third step, the feature data to be collated is generated using the pupil opening degree index obtained at the second step based on the feature data and the transformation rule registered in the iris database in conjunction with a registrant. *(Nishida, Col. 4 Line 53 to Col. 5 Line 16)*"

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Oda with Nishida for the purpose of fixing images deformed by noise.

12. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzaki (Patent #6,614,919), hereafter referred to as Suzaki.

Regarding **claim 10,** Oda discloses the personal authentication method of claim 1,

But Oda does not specifically teach

"wherein the pupil opening degree index is the ratio of a pupil diameter to an iris diameter in an iris image." *(Suzaki, Col. 8 Lines 15-25, "ratio of the radius rp of the pupil circle and the radius ri of the iris circle to the central angle Ap of the pupil is determined (ratio IP=ri/rp)")"*

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Oda with Suzaki for the purpose of defining a pupil opening degree index.

Response to Arguments

13. Applicant's arguments filed June 23, 2008 have been fully considered but they are not persuasive.

Regarding Applicant's argument on page 11 regarding the USC 112 rejection 1st of claim 8, Applicant argued that "thinning the parameters" means causing the parameters to become fewer in number (or bulk). It appears that Applicant has misunderstood the phrase "thinning the parameters". The specification ¶[0152] clearly states "each parameter may be thinned…". There is no reference to removing

parameters (to become fewer in numbers). Therefore the number of parameters remains the same. So applicant's argument does not make sense.

Applicant also argued that "one of ordinary skill in the art would appreciate the ordinary meaning of the verb "thin" in the relevant context". While reducing the size of parameters or reducing the number of parameters in a database to decrease the size the database in order to complete faster searches (or take up less space) is well known. The Examiner has not ever heard or seen (before and after searching) of the term "thinning the parameters" in any context. The Examiner would welcome any references that show the use of the term "thinning the parameters" or similar wording which shows "thinning the parameters" is known in the art.

Regarding Applicant's argument on page 13 ¶4, that Examiner point out where Oda discloses "contraction of pupil diameter". The Examiner suggest Applicant look specifically at Col. 3 Line 57.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GANDHI THIRUGNANAM whose telephone number is (571)270-3261. The examiner can normally be reached on M-Th, 7:30am to 6pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on 571-272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gandhi Thirugnanam/
Examiner, Art Unit 2624

/Samir A. Ahmed/
Supervisory Patent Examiner, Art Unit 2624